

The genus *Sitta* is separated into four subgenera. *Homositta* subgen. nov. (p. 152) type *S. castancoventris* Frankl.; *Micrositta* subgen. nov. (p. 153) type *S. villosa* Verr.; *Leptositta* subgen. nov. (p. 153) type *S. leucopsis* Gould, and *Sitta* type *S. europaea* L.

Our *Sitta carolinensis* is arranged in subgenus *Leptositta*, while all our other North American species fall in *Micrositta*. No less than 22 races of *Sitta europaea* are recognized! This paper is evidently the result of much study and deserves careful consideration.

The following new forms are described: *S. europaea sakhalinensis* (p. 158), Saghalien Isl.; *S. e. hondoensis* (p. 160), Hondo Isl.; and *Rupicitta tephronota iranica* (p. 165) N. E. Persia.—W. S.

Dabbene on Argentine Coots and Grebes.¹—In this interesting paper Mr. Dabbene describes the life histories of *Fulica armellata*, *F. rufifrons*, *Podiceps americanus* and *Podilymbus podiceps*. The nests and eggs are described and figured as well as the plumages of the young nestlings. A series of skins of *Fulica armellata* shows a gradual transition from a blackish downy nestling to a white-breasted juvenal plumage and finally to the slaty adult dress.—W. S.

Birds in Relation to the Dissemination of Mistletoes in the United States.—It is a relief to learn from two recent publications² on western mistletoes that birds are held to play only a minor rôle in the distribution of these destructive plants. The mistletoes considered are those of the genus *Razoumofskya*. The seeds are expelled from the capsules with such force that they have been observed to travel 66 feet with a fall of only 8 feet; aided by strong winds seeds from high trees are known to have carried a quarter of a mile. It is evident that the plants have no real necessity for animal carriers and it is stated by the author that the part played by birds is a minor one.

English sparrows and grouse have been observed to feed upon the seeds and they undoubtedly aid in dissemination of the plants. Both birds and rodents build nests among the mistletoes thus adding to the possibilities of seed distribution. The efficiency of these agents is limited, however, and Dr. D. T. MacDougal states that "the only localities which offer suitable conditions for the germination and growth of the seeds . . . are the tips of branches or the shoots of young trees beneath. It is to be seen that no animals are to be found in the habitat of the parasite which would in ordinary usage carry the seeds to these locations."³

So much for the dissemination of *Razoumofskya*; with our other genus

¹ Notas Biologicas sobre Gallaretas y Macas. Par Roberto Dabbene. Ann. Mus. Nac. Hist. Nat. Buenos Aires, XXVIII, pp. 183-192. July 19, 1916.

² Weir, James R. Bull. 317, U. S. Dept. Agr., Jan. 20, 1916, p. 24, and Bull. 360, June 17, 1916, p. 34.

³ Minnesota Botanical Studies 2, p. 172, 1899.

(*Phoradendron*) of mistletoes things are quite different as the seeds are seldom distributed from tree to tree (except by gravity) by any agencies besides birds and other animals. These mistletoes are the most injurious also as they are known to kill many trees. The birds that are important disseminators of *Phoradendron* in Texas are, according to Professor H. H. York,¹ Mockingbirds, Sparrows, and Cardinals, and according to Dr. W. L. Bray,² Mockingbirds, Cedarbird and Robins.

Dr. Bray says: "It is the conclusion of most observers that the Mockingbird is the chief distributor of mistletoe seed, but perhaps the cedar birds actually distribute more, for in March and April these birds appear in flocks of hundreds in search of berry mast — especially hackberries — and during the brief visits of a few days or a week or two all the berry-laden trees are visited repeatedly until the berries are gone. During these flights, mistletoe berries are also eaten, though probably not much noticed until the hackberry crop is exhausted. Robins also are reported to be common distributors of mistletoe seed. In the vicinity of Austin large flocks of robins spend the winter, or part of it, in the cedar brakes, where they feed largely on cedar mast; but at times they appear in numbers about farmyards and in towns, feeding upon hackberries, and during these visits also upon mistletoe berries."

The birds which the Biological Survey has found to feed upon *Phoradendron* berries and which therefore distribute the seeds are the California Jay, Cedarbird, *Phainopepla*, California Thrasher, Hermit Thrush, Robin, Bluebird, and Western Bluebird.

While the problem of controlling mistletoes is a serious one in some localities, it is not likely that aggressive action against birds will ever be undertaken as a partial solution. The destruction of birds locally would be like dipping water from the ocean; others would come in to take their places and nothing would be gained. On any other scale combating mistletoe by killing birds is unthinkable. Like most pests mistletoe is best controlled by direct attack. Anyone interested in the European experience relating to birds as distributors of mistletoe will find it summarized by C. von Tubeuf in the article indicated by the appended reference.³— W. L. M.

Further Data on the Spread of the Chestnut-blight Fungus.—

In previous communications to 'The Auk,'⁴ the writer has called attention to a publication on birds as carriers of the chestnut-blight fungus and to another which showed the great importance of the wind in distributing

¹ Bull. 120, Univ. Texas, March 15, 1909, p. 7.

² Bull. 166, U. S. Bureau of Plant Industry, Feb. 2, 1910, pp. 11-12.

³ Naturwiss. Zeitschr. f. Forst. u. Land wirtsch. 6. H 1, 1908, pp. 47-68.

⁴ 32, No. 1, Jan. 1915, p. 119 and No. 3, July, 1915, p. 378.

⁵ Studhalter, R. A. and Ruggles, A. G., Insects as Carriers of the Chestnut-blight fungus, Bull. 12, Pennsylvania, Dept. of Forestry, April, 1915, 33 pp., 24 figs.